

## ABSTRACT OF THE DISCLOSURE

An oscillator circuit is formed of a differential LC resonant circuit formed of an L load differential circuit including inductance-variable portions and a capacitor element, and a positive feedback circuit formed of  
5 N-channel MOS transistors. The inductance-variable portion is configured to vary the inductance by selecting a plurality of switch circuits arranged between a plurality of arbitrary positions on a spiral interconnection layer and the input/output terminal, and thereby can control an oscillation frequency. The inductance-variable portions form  
10 an inductor pair when the switch circuit among the switch circuits coupled between the first input/output terminals is turned on together with the switch circuit.